

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

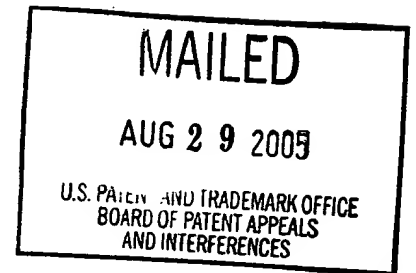
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRIDTJOV JOHANSEN

Appeal No. 2005-1682
Application 09/746,560

ON BRIEF



Before KIMLIN, WARREN and JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 25 through 32. Claims 16 through 24 are also of record and have been withdrawn from consideration by the examiner under 37 CFR § 1.142(b).

Claims 25, 26 and 29 illustrate appellant's invention of building insulating material, and is representative of the claims on appeal:

25. An environmentally friendly building insulating material which does not contain substances which are harmful or irritating to people and which does not release harmful substances of dust, consisting essentially of

fabric remnants which have been shredded into a shoddy and then mixed with flax fibers and a fibrous polyester with a low melting point to form an aerated homogeneous mass, and then molded to shape and heat-treated until the polyester fibers melt, bonding the fabric and flax fibers together.

26. An insulating material according to claim 25, wherein the polyester in fibrous form has a melting point in the range 100-300°C, and a dtex value in the range 2-10.

29. An insulating material according to claims 25 or 27 wherein the shoddy mass further comprises recycled cardboard and/or wastepaper which is shredded into fibers, said recycled cardboard and/or wastepaper being present in an amount up to 40% by weight.

The references relied on by the examiner are:

Barrable	4,101,335	Jul. 18, 1978
Doerer et al. (Doerer)	4,418,031	Nov. 29, 1983
Vöst et al. (Vöst)	5,047,453	Sep. 10, 1991

The examiner has rejected appealed claims 25 through 28 and 30 through 32 under 35 U.S.C. § 103(a) as being unpatentable over Doerer in view of Barrable (answer, pages 3-6), and claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Doerer in view of Barrable as applied to claims 25 and 27, and further in view of Vöst (answer, page 6).

Appellant states that with regard to the first ground of rejection, claims 25 and 27 are a group and “each of claims 26, 28, 30, 31 and 32 should be considered separately” (brief,¹ page 7). The examiner finds that there are no arguments in the brief that “explain why claims 28, 30, 31 and 32 are believed to be separately patentable,” and that there are arguments with respect to the separate patentability of claim 26 on page 26 of the brief (answer, pages 2-3). The examiner holds in sum that only claims 25 and 26 have been sufficiently argued with respect to patentability to merit separate consideration because appellant has only pointed to the limitations of the other claims, and that claims 25, 28 and 30 and claims 26, 27, 31 and 32 are considered together (*id.*, page 3). Appellant submits that there is sufficient argument in the brief establishing that claims 28, 30, 31 and 32 are separately patentable (reply brief, page 3). We have reviewed the arguments on pages 13 and 22-23 of the brief, and based thereon, agree with the examiner. Thus, we decide this appeal based on appealed claims 25, 26 and 29 as representative of the examiner’s grounds of rejection and appellant’s arguments with respect thereto. 37 CFR § 1.192(c)(7) (2003); *see In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) (“See 37 CFR § 1.192(c)(7) (2001). If the brief fails to meet either requirement, the Board is free to select a single claim for each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of the rejection based solely on the selected representative claim.”); *In re Baxter Travenol Labs.*, 952 F.2d 388,

¹ We consider the brief filed January 28, 2004.

392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) (“It is not the function of this court to examine the claims in greater detail than argued by appellant, looking for nonobvious distinctions over the prior art.”); *see also* 37 CFR § 41.37(c)(1)(vii) (September 2004).

We affirm.

Rather than reiterate the respective positions advanced by the examiner and appellant, we refer to the answer and to the brief and reply brief for a complete exposition thereof.

Opinion

We agree with the supported position advanced by the examiner (answer, pages 3-6) that, *prima facie*, the claimed building insulating material encompassed by appealed claims 25 and 26 would have been obvious over the combined teachings of Doerer and Barrable to one of ordinary skill in this art at the time the claimed invention was made, and that the claimed building insulating material encompassed by appealed claim 29 would have been obvious over the combined teachings of Doerer, Barrable and Vöst to one of ordinary skill in this art at the time the claimed invention was made. Thus, we again consider the record as a whole with respect to these grounds of rejection in light of appellant’s rebuttal arguments in the brief and reply brief. *See generally, In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

Upon reconsideration of the record as a whole we agree with the position of the examiner, including his response to appellant’s arguments in the brief (answer, pages 7-13), to which we added the following for emphasis.

We interpret appealed independent claim 25 and appealed claims 26 and 29 dependent thereon by giving the terms thereof the broadest reasonable interpretation in their ordinary usage as they would be understood by one of ordinary skill in the art in light of the written description in the specification, including the drawings, as interpreted by this person, unless another meaning is intended by appellant as established in the written description of the specification, and without reading into the claims any limitation or particular embodiment disclosed in the specification. *See, e.g., In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). We determine that plain language of claim 25 specifies a building insulating material characterized in product-by-process

language as consisting essentially of at least some amount, however small, of a shoddy of any manner of shredded fabric remnants mixed with some amount, however small, of any manner of flax fibers and some amount, however small, of any manner of low melting point, fibrous polyester to form any manner of aerated homogeneous mass that is molded in any manner to any desired shape and then heat-treated until the polyester fibers melt, thus bonding the fabric fibers and flax fibers together. *See generally, In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). Claim 26 limits claim 25 by specifying that the fibrous polyester has a melting point in the range 100-300°C and a dtex value in the range 2-10. Claim 29 limits claim 25 by specifying that the mixture of fibers further comprises up to 40% by weight of shredded recycled cardboard and/or wastepaper.

We find that Doerer would have disclosed to one of ordinary skill in this art² that a flexible mat of intertwined fibers is formed from a mixture of base fibers, which can be cellulosic fibers, and carrier fibers, which can be polyester fibers, that can include carrier fibers which are a shoddy which, for example, can be about 35% cotton fibers and 65% polyester fibers, that can be molded into a predetermined shape by the application of heat and/or pressure, wherein the carrier fibers are bonded to the base fibers and to each other, the product being of a uniform density or having areas of different density, and useful as, among others, building materials which are heat or sound insulating (e.g., col. 1, ll. 10-26; col. 2, ll. 9-21 and 43-67; col. 3, ll. 8-24; col. 3, l. 61, to col. 4, l. 7; col. 4, l. 30, to col. 5, l. 14; col. 5, ll. 40-57; col. 7, ll. 18-26 and 33-46). Doerer describes the fibrous mat in **FIG. 1** and the intertwined, bonded fibers in **FIG. 4** (e.g., col. 3, ll. 40-41 and 47-49). Doerer discloses that the mold can be in any desired shape and can be operated at a range of 325°F to 590°F, that is, 162.78°C to 310° C, optionally with pressure, wherein “the temperature, pressure, and time cycle required will vary depending on the final product requirements” (e.g., col. 5, ll. 40-47). Doerer discloses that the base fibers can be

² It is well settled that a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom, see *In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir. 1992); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968), presuming skill on the part of this person. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

cellulosic fibers, including, among others, wood, paper, cotton and jute (col. 3, l. 66, to col. 4, l. 1).

We find that Barrable would have disclosed to one of ordinary skill in this art that cellulosic reinforcing fibers, including, among others, wood pulp, news print, jute, flax and cotton, can be used to mold fibrous compositions to form shaped building material articles, including thermal insulating products, such as mats (e.g., col. 1, l. 54, to col. 2, l. 26). Vöst would have disclosed to this person that fibrous material, including wood chips, shredded waste paper and shoddy, which can be from fiber wastes that contain polyester fibers, are used in preparing molded thermal and acoustical insulating materials, such as mats (e.g., col. 1, ll. 10-40, and col. 2, ll. 47-61).

Appellant principally contends that the claimed molded products of appealed claims 25, 26 and 29 are prepared from an “aerated” mixture of fibrous materials, thus resulting “in the aerated product which achieves a product which is largely air,” where the thus aerated molded mat is necessarily inherently less dense than the inherently compressed fibrous mat of Doerer prepared using a dry process with heat and pressure, pointing to col. 5, l. 44, of the reference and relying on the methods and density of the compressed products disclosed by Barrable and Vöst (brief, e.g., pages 9, 12, 14, 16, 20 and 29; reply brief, e.g., pages 5-6, 7 and 10-11). The examiner responds that “[a]ppellant has not claimed any degree of aeration, molding steps, or resulting density that would differentiate the present invention from the Doerer reference in view of Barrable and Vöst,” pointing out that the molding of the aerated mixture as claimed would not necessarily result in an aerated mat product because the air can be squeezed out of the fibrous material in the molding step and subsequent heat treating step, there being no claim limitation on the aeration and density of the claimed molded product; that aeration and density of the claimed molded product is not disclosed in the specification; that Doerer discloses a dry process exposing the fibers to air, molds the fibrous material in a manner falling within the claims, and heats the fibrous material to form the mat as claimed; and that Barrable and Vöst are not relied on with respect to the method of forming the product taught in Doerer (answer, e.g., pages 7, 9-10, 11 and 12-13).

Appellant further contends that there is no suggestion to select polyester fibers from the large group of carrier fibers in Doerer because the same is not preferred, and with respect to claim 26, there is no teaching in the reference leading to the selection of a polyester within the claimed melting pointing point and dtex ranges; that the use flax fibers as cellulosic base fibers in Doerer is not suggested by the teaching of flax reinforcing fibers in the large disclosure of fibers in Barrable because flax and other cellulosic fibers are not equivalent, the processes of Doerer and Barrable are different and both do not use polyester fibers, and the substitution of flax into the process of Doerer would not result in the claimed products; and, with respect to claim 29, that the same arguments apply to the use of the wastepaper fibers of Vöst in the process of Doerer, pointing to the difference in processes (brief, e.g., pages 9, 10-11, 14-7, 19-20, 21, 27 and 29; reply brief, e.g., pages 4-5 and 11). The examiner responds that one of ordinary skill in the art would have selected polyester fibers from the list of carrier fibers in Doerer and would have used a polyester fiber that would result in the products obtained by the processes of the reference because polyester fibers are not unique; and that one of ordinary skill would have recognized that flax fibers disclosed in Barrable are functionally equivalent to the other cellulosic fibers in Doerer to make insulated mats despite the differences in the processes of the references, and thus would have made the selection of flax fibers based on the teachings of Doerer (answer, e.g., pages 7, 9, 10, 11 and 12).

It is well settled that where the examiner has established that a claimed product characterized in product-by-process language in a claim reasonably appears to be *prima facie* obvious over a product prepared by an identical or substantially identical process disclosed in a reference that would have been practiced by one of ordinary skill in the art in routinely working within the teachings of that reference, the dispositive issue is whether the claimed product is identical or substantially identical to the prior art product, in which respect appellant has the burden of establishing by effective argument and/or objective evidence that the claimed product is not identical or substantially identical to the prior art product, that is, of patentably distinguishing the claimed product over the teaching of the reference even though the rejection is based on § 103(a). See *Thorpe*, 777 F.2d at 697, 227 USPQ at 966 (Fed. Cir. 1985); *In re Best*, 562 F.2d 1252, 1254-56, 195 USPQ 430, 432-34 (CCPA 1977) (“Where, as here, the claimed

and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. *See In re Ludtke*, [441 F.2d 660, 169 USPQ 563 (CCPA 1971)]. Whether the rejection is based on “inherency” under 35 USC § 102, on “prima facie obviousness” under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO’s inability to manufacture products or to obtain and compare prior art products. [Footnote and citation omitted.]”); *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 325-26 (CCPA 1974), citing *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972) (“In *Brown*, the court was in effect saying that the [PTO] bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature than would be the case when a product is claimed in the more conventional fashion.”); *cf. In re Spada*, 911 F.2d 705, 708-09, 15 USPQ2d 1655, 1657-58 (Fed. Cir. 1990) (“The Board held that the compositions claimed by Spada ‘appear to be identical’ to those described by Smith. While Spada criticizes the usage of the word ‘appear’, we think that it was reasonable for the PTO to infer that the polymerization by both Smith and Spada of identical monomers, employing the same or similar polymerization techniques, would produce polymers having the identical composition.”).

We are not persuaded by appellant’s arguments in light of the examiner’s response thereto that there is a difference between the claimed insulating materials encompassed by appealed claims 25, 26 and 29, as we have interpreted these claims above, and the product that one of ordinary skill in this art would have reasonably arrived at by routinely following the combined teachings of Doerer and Barrable either alone, with respect to claims 25 and 26, or as combined with Vöst, with respect to claim 29. We, like the examiner, find no limitation requiring that the claimed product is in fact “aerated,” and no evidence in the specification that supports appellant’s position in this respect because the insulating mat prepared in the illustrative example is not disclosed as “aerated” (pages 6-7). We also agree with the examiner that there is no evidence in the specification example establishing the density of the mat molded in a mat former and then heated in a smelting furnace at approximately 170°C to melt the unspecified

polyester fibers. In these respects, we observe that the mat illustrated in specification **Fig. 1** is shown as smooth surfaced, not an “aerated” fibrous surface.

In contrast, we find that the fiber mat and fiber structure described in Doerer **FIGs. 1 and 4** would have suggested to one of ordinary skill in this art that the process of Doerer should be conducted to result in such a fibrous mat, which appears to us to be reasonably characterized as “aerated,” and would have conducted the molding process and subsequent heat treatment taught in the reference in this respect. Thus, we are not convinced that there is a difference in the process steps characterizing the claimed product as encompassed by claim 25 and the process steps taught by Doerer.

We also cannot agree with appellant’s arguments that one of ordinary skill in this art would not have selected polyester fibers from among those carrier fibers disclosed by Doerer because they are not preferred. *See In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976) (“[T]he fact that a specific [embodiment] is taught to be preferred is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered.”). We agree with the examiner that one of ordinary skill in this art would have selected a polyester fiber as a carrier fiber that would be appropriate for Doerer’s process. In this respect, this person would have reasonably selected a polyester which melts in the range of 325°F to 590°F, that is, 162.78°C to 310° C, taught by Doerer as a useful range to heat the fibrous mat in the mold. This range substantially overlaps the melting point range of appealed claim 26.

We are also in agreement with the examiner that have one of ordinary skill in the art would have been led by Doerer to select any cellulosic fiber useful in preparing mats as the base fiber, and thus would have selected flax fibers and wastepaper fibers disclosed by Barrable and Vöst, respectfully. We are not persuaded otherwise by appellant’s arguments of the differences in processes between these references and Doerer because there is no evidence in the record that flax fibers and wastepaper fibers would not be expected to function as basic fibers in Doerer’s process. Indeed, Doerer discloses a range of cellulosic fibers, a number of which are in common with a number of the fibers in the range of cellulosic reinforcing fibers taught by Barrable and by Vöst to be useful in similar insulating products.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in Doerer and Barrable alone and combined with Vöst with appellant's countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 25 through 32 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (September 2004).

AFFIRMED

Edward C. Smith

EDWARD C. KIMLIN
Administrative Patent Judge

Robert K. Rasmussen

CHARLES F. WARREN
Administrative Patent Judge

BOARD OF PATENT
APPEALS AND
INTERFERENCES

Wm. F. Jones

JEFFREY T. SMITH
Administrative Patent Judge

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